

REMARKS

Claims 1-28 are currently pending. Claims 1, 3-12, 14-21, and 23-28 have been rejected. Claims 2, 13, and 22 have been indicated as containing allowable subject matter, but are objected to for their dependence on rejected base claims. Claims 1, 21, and 23 are amended. Claims 3 and 22 have been cancelled. Reconsideration of the above-identified application in view of the present amendment and these remarks is respectfully requested.

I. Rejection of Claims 1, 3-12, 14-21, and 23-28 under 35 U.S.C. §102(b)

Claims 1, 3-12, and 14-21, and 23-28 have been rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent 6,459,974 to Baloch et al. (hereinafter: "Baloch"). Applicants respectfully submit that each of these claims is novel over Baloch.

A. Claims 12 and 14-20

Claim 12 recites a system for classifying image data associated with a vehicle occupant safety system into an associated one of a plurality of output classes. A vision system images a vehicle interior to provide an input image. A plurality of pattern recognition classifiers each have associated first and second output classes from the plurality of output classes and are operative to select one of the first and second output classes as a candidate output class for the input image and the other of the first and second output classes as a rejected output class. Each classifier then generates a confidence value associated with the classifier based on the selection. An arbitrator selects a classifier having the best associated confidence value from a classifier set initially comprising the plurality of classifiers, determines

the rejected class associated with the selected classifier, and removes each classifier within the classifier set having the rejected class as one of its associated first and second output classes.

It is respectfully submitted that Baloch does not teach an arbitrator that selects a classifier having the best associated confidence value from a classifier set initially comprising the plurality of classifiers, determines the rejected class associated with the selected classifier, and removes each classifier within the classifier set having the rejected class as one of its associated first and second output classes. Specifically, the arbitration process described in Baloch does not select a classifier having a best confidence value, but instead weights and aggregates the results from a set of classifiers according to their output.

Accordingly, the sum of the weighted confidence values from a first set of classifiers that selected a first class is compared to the sum of the weighted confidence values from a second set of classifiers that selected a second class. So, Baloch teaches selecting the class with the largest aggregate confidence value, not the classifier with the largest confidence value, as recited in the claim. In fact, in the Baloch system, the classifier having the best confidence value can be "outvoted" by two or more classifiers having less confidence values. It is thus respectfully submitted that claim 12 is novel over Baloch.

Claims 14-20 depend, directly or indirectly, from claim 12, and should be allowable for at least the reasons discussed for claim 14. It is thus respectfully submitted that claims 12 and 14-20 are novel over the cited art, and withdrawal of the rejection of these claims is respectfully requested.

B. Claims 1 and 3-11

Claim 1 recites a system for classifying an input image into one of a plurality of output classes comprising at least three classes. Each of a plurality of pattern recognition classifiers represents two associated classes from the plurality at least three classes of the of output classes. Each classifier determines a candidate output class and a rejected output class for the input image and generates a confidence value associated with the classifier based on the determination. An arbitrator selects a pattern recognition classifier having the best associated confidence value from the plurality of pattern recognition classifiers and eliminates the rejected class determined at the selected classifier from consideration as the associated class for the input image. In eliminating the rejected class from consideration, the respective outputs of each of a plurality of pattern recognition classifiers that represent the rejected class are ignored, except for the selected pattern recognition classifier.

It is respectfully submitted that Baloch does not teach an arbitrator that selects a pattern recognition classifier having the best associated confidence value from the plurality of pattern recognition classifiers and eliminates the rejected class determined at the selected classifier from consideration as the associated class for the input image, such that the respective outputs of each of a plurality of pattern recognition classifiers that represent the rejected class are ignored, except for the selected pattern recognition classifier. The Baloch system as described above in relation to claim 12, does not teach selecting a pattern recognition classifier having a best associated confidence value. Further, there is no teaching in Baloch of

selectively ignoring the outputs of classifiers according to the output classes they represent. It is thus respectfully submitted that claim 1 is novel over Baloch.

Claims 4-11 depend, directly or indirectly, from claim 1, and should be allowable for at least the reasons discussed for claim 1. It is thus respectfully submitted that claims 1 and 4-11 are novel over the cited art, and withdrawal of the rejection of these claims is respectfully requested.

C. Claims 21 and 23-28

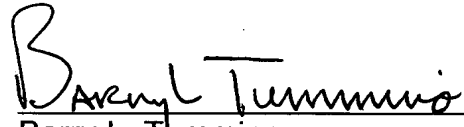
Applicants note with appreciation Examiner's indication that claims 2, 13, and 22 contain allowable subject matter. Claim 21 has been amended to incorporate the subject matter of claim 22 in independent form, and claim 22 has been cancelled. It is thus respectfully submitted that claim 21 should now be allowable. Claims 23-28 depend, directly or indirectly, from claim 21, and should also be allowable. The withdrawal of the rejection of these claims is respectfully requested.

II. Conclusion

In view of the foregoing amendment and remarks, it is respectfully submitted that claims 1-21 and 23-28 define over the cited art. Withdrawal of the rejection of the claims and the passage of the application to issue is therefore requested.

Please charge any deficiency or credit any overpayment in the fees for this matter to our Deposit Account No. 20-0090.

Respectfully submitted,


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